

REMARKS

Present Status of Application

In response to Applicants' Appeal Brief, the previously-rendered FINAL rejection was withdrawn, and the claims were rejected on newly-cited art. The Office Action rejected independent claims 1, 14, and 16 as allegedly anticipated by U.S. Patent 6,094,453 to Gosselin. Independent claims 1 and 16 have been amended. For reasons set forth herein, Applicants respectfully disagree and request that these rejections be withdrawn.

In addition, the Office Action rejected dependent claim 9 as allegedly indefinite, due to an antecedent basis issue. Applicants have amended claim 9 to change its dependency to claim 6 (instead of claim 1). In view of this amendment, the basis of the rejection has been overcome and the rejection should be withdrawn.

Discussion of Substantive Rejections

There are several significant distinctions between the invention defined in the independent claims of the present application and the teachings of Gosselin. One such distinction relates to the comparison and/or communication of only a portion of a current frame of graphics information, as opposed to an entire frame of information. As admitted by the Office Action (see middle of page 3) Gosselin allegedly discloses "consecutive frames are compared and analyzed to determine what changes 56...have occurred in the current image 52...with respect to a base image 54." As is clear from the teachings of Gosselin, as applied by the Office Action, comparisons are made on frame-by-frame basis. In contrast, the claims of the present application define systems and methods that divide a given frame into smaller segments, where each of the smaller segments is compared against corresponding segments of a successive frame. Changes in these segments (or portions) of a current frame are identified.

A significant efficiency gain is achieved (e.g., bandwidth reduction is realized) by transmitting only the changed segments or portions of a given frame. No such feature is disclosed or suggested by Gosselin, nor is any such feature alleged by the Office Action. These features, as embodied and defined in the independent claims, are discussed below.

For at least this reason the rejections of all claims are fundamentally misplaced and should be overturned.

Independent claim 1 was rejected under 35 U.S.C. § 102 as allegedly anticipated by Gosselin. Applicants respectfully submit that this rejection be overturned.

Independent claim 1 recites:

1. An apparatus for communicating graphics across a network comprising:

a frame buffer memory for storing and maintaining at least a portion of a previous frame of graphics information, the graphics information being contained in a video signal;

a temporary memory configured to store at least a portion of a current frame of graphics information;

comparison logic for comparing a portion of the current frame of graphics information with a corresponding portion of the previous frame, wherein the portion is an amount less than the entire frame buffer; and

transmission logic for transmitting only the portion of the current frame to a destination computer, if the comparison logic determines that the portion of the current frame of graphics information differs from the corresponding portion of the previous frame by more than a predetermined measure.

(*Emphasis added.*) Claim 1 patently defines over Gosselin for at least the reason that Gosselin fails to disclose the features emphasized (bold and italic) above.

Among other features, claim 1 defines “comparison logic for comparing a portion of the current frame of graphics information with a corresponding portion of the previous frame.” Claim 1 further defines “transmission logic for transmitting only the portion of the current frame to a destination computer.” These features, among others, clearly define

independent claim 1 over the teachings of Gosselin. As distinguished from the present application, Gosselin is directed to a system and method for video transmission that utilizes a unique compression in order to reduce the amount of data to be communicated to a destination or receiving computer. In addition to this data compression, and as summarized above, Gosselin reduces the amount of data communicated between successive frames by communicating information about changed data within the frame. However, the comparison is made on a frame-by-frame basis, wherein an entire graphics frame is compared to a previous frame (even though changes may be identified in only a portion or area of the compared frame). In contrast, claim 1 defines an apparatus having comparison logic for comparing only a portion of a current frame with a corresponding portion of a previous frame. Thereafter, if the comparison logic determines that the portion of the current frame of graphics information differs from the corresponding portion of the previous frame, then the currently compared portion is transmitted to the destination computer. Simply stated, this feature is neither disclosed nor suggested in Gosselin.

For at least the foregoing reasons, Applicants respectfully submit that the rejections of claim 1 are misplaced and should be overturned. Of course, the rejections of claims 2-13, which depend from claim 1, should be overturned for at least the same reasons.

Independent claim 14 was rejected under 35 U.S.C. § 102 as allegedly anticipated by Schneider. Applicants respectfully submits that this rejection be overturned.

Independent claim 14 recites:

14. An apparatus for displaying graphics information received from a remote computer and communicated across a network comprising:
an input for receiving packetized graphics information; and
input logic configured to format and store a portion of a frame of graphics information received at the input into an appropriate location of a frame buffer memory, the portion being an amount less than the whole frame buffer.

(*Emphasis added.*) Claim 14 patently defines over Gosselin for at least the reason that Gosselin fails to disclose the features emphasized (bold and italic) above.

Claim 14 specifically defines “input logic configured to format and store a portion of a frame of graphics information...the portion being an amount less than the whole frame buffer.” For reasons similar to those noted above in connection with claim 1, this feature is neither taught nor disclosed in Gosselin, and defines the invention of claim 14 over the teachings of Gosselin.

Applicants respectfully submit that the rejection of claim 14 misplaced and should be overturned. Of course, the rejection of claim 15, which depends from claim 14, should be overturned for at least the same reasons.

Independent claim 16 was rejected under 35 U.S.C. § 102 as allegedly anticipated by Gosselin. Applicants respectfully submit that this rejection be overturned.

Independent claim 16 recites:

16. A method for communicating graphics across a computer network comprising:
storing at least a portion of a frame of graphics information obtained from a video signal;
receiving at least a portion of a current frame of graphics information;
comparing a portion of the current frame of graphics information with a corresponding portion of the stored frame of graphics information, wherein the portion is an amount less than the entire frame buffer;
if the compared portion of the current frame of graphics information differs by at least a predetermined amount from the corresponding portion of the stored graphics information, then transmitting the compared portion of the current frame of graphics information to a destination computer; and
if the compared portion of the current frame of graphics information differs by at least a predetermined amount from the corresponding portion of the stored graphics information, then overwriting the corresponding portion of the stored graphics information with the compared portion of the current frame of graphics information.

(*Emphasis added.*) Claim 16 patently defines over Gosselin for at least the reason that Gosselin fails to disclose the features emphasized (bold and italic) above.

Similar to the discussion above in connection with claim 1, claim 16 defines actions of “comparing a portion of the current frame of graphics information with a corresponding portion of the stored frame of graphics information.” Claim 16 further defines that a portion is an amount less than the entire frame buffer. In addition, claim 16 further defines actions of “transmitting the compared portion...to a destination computer” and “overriding the corresponding portion of the stored graphics with the compared portion...” Again, and as discussed above, Gosselin discloses a system and method that teaches a comparison or evaluation of entire frames of graphics information, and does not disclose or suggest the comparison of only portions of a frame of graphics information, followed by the contingent transmission and overwriting of only portions of a previous graphics frame, if the comparison action determines that a current frame differs from a previous frame by at least some predetermined amount.

For at least the foregoing reasons, Applicants respectfully submit that the rejection of claim 16 is misplaced and should be overturned. Of course, the rejections of claims 17-19, which depend from claim 16, should be overturned for at least the same reasons.

Any Ensuing Office Action Should be Non-Final

Applicants have amended independent claims 1 and 16 above merely to clarify that the claimed “portion” is “an amount less than the entire frame buffer.” Applicants submit that this amendment adds no new substantive limitation to the claim, but is merely a clarification of the language already existing. In this regard, the claims previously recited the comparing of “a portion of the current frame.” Applicants respectfully submit that no proper construction of the term portion could have been applied to equate the “portion” with an entire frame of graphics

information. Accordingly, the amendments made to claim 1 and 16 should not be viewed as necessitating any new grounds of rejection, should any ensuing Office Action apply newly-cited art. Furthermore, the clarifications made by the amendments to claims 1 and 16 already existed in claim 14, which (as originally filed) confirmed that "the portion being an amount less than the whole frame buffer."

CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fees are believed to be due in connection with this amendment and response. If, however, any fees are deemed to be payable, you are hereby authorized to charge any such fees to Hewlett-Packard Company's deposit account No. 08-2025.

Respectfully submitted,



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Please continue to send all future correspondence to:

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